

## ANALYTICAL REPORT

Job Number: 280-41536-1

Job Description: 995|Waimanalo Gulch LF

For:

Waste Management  
Waimanalo Gulch Landfill  
92-460 Farrington Highway  
Kapolei, HI 96707

Attention: Mr. Justin Lottig



Approved for release.  
Betsy A Sara  
Project Manager II  
5/14/2013 5:05 PM

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05/14/2013

cc: Mr. Mark Hofferbert  
Ms. Margie Thach

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

**TestAmerica Laboratories, Inc.**

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## CASE NARRATIVE

**Client: Waste Management**

**Project: 995|Waimanalo Gulch LF**

**Report Number: 280-41536-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

### **Sample Receiving**

The sample was received on 04/27/2013; the sample arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 1.1C, 2.2C and 4.2C.

There was no sample collection date listed on the chain of custody for sample DB01E. The client provided a revised chain of custody on 4/26/13.

### **Holding Times**

All holding times were met.

### **Method Blanks**

All Method Blanks were within established control limits.

### **Laboratory Control Samples (LCS)**

All Laboratory Control Samples were within established control limits.

### **Matrix Spike (MS) and Matrix Spike Duplicate (MSD)**

The method required MS/MSD could not be performed for Method 625 and Method 1664A due to insufficient sample volume, however, LCS/LCSD pairs were analyzed to demonstrate method precision and accuracy.

The Matrix Spikes and Matrix Spike Duplicates performed on samples from other clients exhibited recoveries outside control limits for Total Lead Method 200.7 and Total Phosphorus Method 365.1. Because the corresponding Laboratory Control Samples and the Method Blank samples were within control limits, these anomalies may be due to matrix interference and no corrective action was taken.

Sample DB01E was selected to fulfill the laboratory batch quality control requirements for Method 410.4. Analysis of the laboratory generated MS/MSD for this sample exhibited recoveries of Chemical Oxygen Demand (COD) below the lower control limit indicating the possible presence of a matrix interference.

All other MS and MSD samples were within established control limits.

### **General Comments**

For samples requiring analysis at a dilution, the dilution factor has been multiplied by the Method Detection Limit (MDL) for each analyte and evaluated versus the project-specific reporting limit (PSRL). If the obtained value is below the PSRL, then the PSRL is preserved as the reporting limit for the diluted result, otherwise, the obtained value becomes the reporting limit. This is done in order to maintain the PSRL to meet permit requirements at the request of the client and to report the lowest possible RL for each analyte.

The analysis for Biochemical Oxygen Demand (BOD) was performed at TestAmerica's Honolulu facility.  
TestAmerica Honolulu  
99-193 Aiea Heights Drive  
Suite 121  
Aiea, HI 96701  
Phone: 808.486.5227

The analysis for Hexavalent Chromium was performed at TestAmerica's Irvine facility.  
TestAmerica Irvine  
17461 Derian Avenue  
Suite 100  
Irvine, CA 92614  
Phone: 949.261.1022

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-41536-1

Lab Sample ID Analyte	Client Sample ID Analyte	Result	Qualifier	Reporting Limit	Units	Method
280-41536-1	DB01E					
Mercury		0.00016	J	0.00020	mg/L	245.1
Field pH		8.70			SU	Field Sampling
Ammonia		0.038	J	0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.61		0.50	mg/L	351.2
Nitrate Nitrite as N		3.1		0.10	mg/L	353.2
Phosphorus, Total		0.46		0.050	mg/L	365.1
Chemical Oxygen Demand		32		20	mg/L	410.4
Total Suspended Solids		1100		11	mg/L	SM 2540D
Nitrogen, Total		3.7		0.10	mg/L	Total Nitrogen
<b><i>Dissolved</i></b>						
Chromium, hexavalent		1.6		1.0	ug/L	218.6
<b><i>Total Recoverable</i></b>						
Cadmium		0.0010	J	0.0050	mg/L	200.7 Rev 4.4
Iron		46		0.10	mg/L	200.7 Rev 4.4
Lead		0.025		0.0090	mg/L	200.7 Rev 4.4
Zinc		0.12		0.020	mg/L	200.7 Rev 4.4

## METHOD SUMMARY

Client: Waste Management

Job Number: 280-41536-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Semivolatile Organic Compounds (GC/MS) Liquid-Liquid Extraction	TAL DEN TAL DEN	40CFR136A 625 40CFR136A 625	
Metals (ICP) Preparation, Total Recoverable Metals	TAL DEN TAL DEN	EPA 200.7 Rev 4.4 EPA 200.7	
Mercury (CVAA) Preparation, Mercury	TAL DEN TAL DEN	EPA 245.1 EPA 245.1	
HEM and SGT-HEM HEM and SGT-HEM (SPE)	TAL DEN TAL DEN	1664A 1664A 1664A 1664A	
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl	TAL DEN TAL DEN	MCAWW 351.2 MCAWW 351.2	
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Phosphorus, Total Phosphorus, Total	TAL DEN TAL DEN	EPA 365.1 MCAWW 365.2/365.3/365	
COD	TAL DEN	MCAWW 410.4	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Nitrogen, Total	TAL DEN	EPA Total Nitrogen	
Field Sampling	TAL DEN	EPA Field Sampling	
General Sub Contract Method	TAL HON	Subcontract	
Chromium, Hexavalent (Ion Chromatography) Sample Filtration, Field	TAL IRV	EPA 218.6 FIELD_FLTRD	

### Lab References:

TAL DEN = TestAmerica Denver

TAL HON = TestAmerica Honolulu

TAL IRV = TestAmerica Irvine

### Method References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

## METHOD / ANALYST SUMMARY

Client: Waste Management

Job Number: 280-41536-1

Method	Analyst	Analyst ID
40CFR136A 625	Hoffman, Michael G	MGH
EPA 200.7 Rev 4.4	Harre, John K	JKH
EPA 245.1	Fredette, Nick	NF
EPA Field Sampling	Field, Sampler	FS
1664A 1664A	Benson, Alex F	AFB
MCAWW 350.1	Elkin, David	DE
MCAWW 351.2	Woolley, Mark	MW
MCAWW 353.2	Scott, Samantha J	SJS
EPA 365.1	Scott, Samantha J	SJS
MCAWW 410.4	Bandy, Darlene F	DFB
SM SM 2540D	Woolley, Mark	MW
EPA Total Nitrogen	Sullivan, Roxanne	RS
EPA 218.6	Welch, Raquel	RW

## SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-41536-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-41536-1	DB01E	Water	04/24/2013 1205	04/27/2013 0930

# **SAMPLE RESULTS**

**Analytical Data**

Client: Waste Management

Job Number: 280-41536-1

Client Sample ID: **DB01E**Lab Sample ID: 280-41536-1  
Client Matrix: WaterDate Sampled: 04/24/2013 1205  
Date Received: 04/27/2013 0930**625 Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	625	Analysis Batch:	280-172261	Instrument ID:	SMS_D
Prep Method:	625	Prep Batch:	280-171704	Lab File ID:	D7913.D
Dilution:	1.0			Initial Weight/Volume:	1052.2 mL
Analysis Date:	05/02/2013 2004			Final Weight/Volume:	1000 uL
Prep Date:	04/29/2013 1125			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0019	0.010
Benzoic acid	ND		0.0095	0.050
p-Cresol	ND		0.00024	0.010
Pentachlorophenol	ND		0.019	0.060
Phenol	ND		0.0019	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	83		50 - 120
2-Fluorobiphenyl	74		36 - 120
2-Fluorophenol	78		30 - 120
Nitrobenzene-d5	79		45 - 120
Phenol-d5	82		36 - 120
Terphenyl-d14	83		52 - 120

**Analytical Data**

Client: Waste Management

Job Number: 280-41536-1

Client Sample ID: **DB01E**Lab Sample ID: 280-41536-1  
Client Matrix: WaterDate Sampled: 04/24/2013 1205  
Date Received: 04/27/2013 0930**218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved**

Analysis Method:	218.6	Analysis Batch:	440-101858	Instrument ID:	IC-20
	N/A	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	05/03/2013 0102			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	1.6		0.25	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-41536-1

Client Sample ID: **DB01E**Lab Sample ID: 280-41536-1  
Client Matrix: WaterDate Sampled: 04/24/2013 1205  
Date Received: 04/27/2013 0930**200.7 Rev 4.4 Metals (ICP)-Total Recoverable**

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-172260	Instrument ID:	MT_025
Prep Method:	200.7	Prep Batch:	280-171772	Lab File ID:	25A3050113.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	05/01/2013 1857			Final Weight/Volume:	50 mL
Prep Date:	05/01/2013 0800				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	0.0010	J	0.00045	0.0050
Iron	46		0.022	0.10
Lead	0.025		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.12		0.0045	0.020
Silver	ND		0.00093	0.010

**245.1 Mercury (CVAA)**

Analysis Method:	245.1	Analysis Batch:	280-172464	Instrument ID:	MT_033
Prep Method:	245.1	Prep Batch:	280-172077	Lab File ID:	130502ac.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	05/02/2013 1602			Final Weight/Volume:	30 mL
Prep Date:	05/02/2013 1200				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.00016	J	0.000027	0.00020

**Analytical Data**

Client: Waste Management

Job Number: 280-41536-1

**General Chemistry****Client Sample ID:** DB01E

Lab Sample ID: 280-41536-1

Date Sampled: 04/24/2013 1205

Client Matrix: Water

Date Received: 04/27/2013 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	ND		mg/L	1.9	5.0	1.0	1664A
	Analysis Batch: 280-172745		Analysis Date: 05/04/2013 1343				
	Prep Batch: 280-172699		Prep Date: 05/04/2013 0923				
Ammonia	0.038	J	mg/L	0.022	0.10	1.0	350.1
	Analysis Batch: 280-172662		Analysis Date: 05/03/2013 1514				
Nitrogen, Kjeldahl	0.61		mg/L	0.18	0.50	1.0	351.2
	Analysis Batch: 280-173404		Analysis Date: 05/08/2013 2322				
	Prep Batch: 280-173366		Prep Date: 05/07/2013 1721				
Nitrate Nitrite as N	3.1		mg/L	0.019	0.10	1.0	353.2
	Analysis Batch: 280-173152		Analysis Date: 05/07/2013 1441				
Phosphorus, Total	0.46		mg/L	0.0050	0.050	1.0	365.1
	Analysis Batch: 280-173755		Analysis Date: 05/10/2013 1436				
	Prep Batch: 280-173493		Prep Date: 05/09/2013 1137				
Chemical Oxygen Demand	32		mg/L	4.1	20	1.0	410.4
	Analysis Batch: 280-172873		Analysis Date: 05/06/2013 1025				
Total Suspended Solids	1100		mg/L	11	11	1.0	SM 2540D
	Analysis Batch: 280-172222		Analysis Date: 05/01/2013 1705				
Nitrogen, Total	3.7		mg/L	0.042	0.10	1.0	Total Nitrogen
	Analysis Batch: 280-173626		Analysis Date: 05/10/2013 0729				

**Analytical Data**

Client: Waste Management

Job Number: 280-41536-1

**Field Service / Mobile Lab****Client Sample ID:** DB01E

Lab Sample ID: 280-41536-1

Client Matrix: Water Date Sampled: 04/24/2013 1205

Date Received: 04/27/2013 0930

Analyte	Result	Qual	Units	Dil	Analysis	Date Analyzed	
					Method	Batch	Date Prepared
Field pH	8.70		SU	1.0	Field Sampling	280-171762	04/24/2013 1205

## DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-41536-1

Lab Section	Qualifier	Description
GC/MS Semi VOA	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals	F	MS/MSD Recovery or RPD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry	F	MS/MSD Recovery or RPD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

# **QUALITY CONTROL RESULTS**

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS Semi VOA</b>					
<b>Prep Batch: 280-171704</b>					
LCS 280-171704/2-A	Lab Control Sample	T	Water	625	
LCSD 280-171704/3-A	Lab Control Sample Duplicate	T	Water	625	
MB 280-171704/1-A	Method Blank	T	Water	625	
280-41536-1	DB01E	T	Water	625	
<b>Analysis Batch: 280-172261</b>					
LCS 280-171704/2-A	Lab Control Sample	T	Water	625	280-171704
LCSD 280-171704/3-A	Lab Control Sample Duplicate	T	Water	625	280-171704
MB 280-171704/1-A	Method Blank	T	Water	625	280-171704
280-41536-1	DB01E	T	Water	625	280-171704

**Report Basis**

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 280-171772</b>					
LCS 280-171772/2-A	Lab Control Sample	R	Water	200.7	
MB 280-171772/1-A	Method Blank	R	Water	200.7	
280-41483-A-1-B MS	Matrix Spike	R	Water	200.7	
280-41483-A-1-C MSD	Matrix Spike Duplicate	R	Water	200.7	
280-41536-1	DB01E	R	Water	200.7	
<b>Prep Batch: 280-172077</b>					
LCS 280-172077/2-A	Lab Control Sample	T	Water	245.1	
MB 280-172077/1-A	Method Blank	T	Water	245.1	
280-41536-1	DB01E	T	Water	245.1	
280-41536-H-3-C MS	Matrix Spike	T	Water	245.1	
280-41536-H-3-D MSD	Matrix Spike Duplicate	T	Water	245.1	
<b>Analysis Batch:280-172260</b>					
LCS 280-171772/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-171772
MB 280-171772/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-171772
280-41483-A-1-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-171772
280-41483-A-1-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-171772
280-41536-1	DB01E	R	Water	200.7 Rev 4.4	280-171772
<b>Analysis Batch:280-172464</b>					
LCS 280-172077/2-A	Lab Control Sample	T	Water	245.1	280-172077
MB 280-172077/1-A	Method Blank	T	Water	245.1	280-172077
280-41536-1	DB01E	T	Water	245.1	280-172077
280-41536-H-3-C MS	Matrix Spike	T	Water	245.1	280-172077
280-41536-H-3-D MSD	Matrix Spike Duplicate	T	Water	245.1	280-172077

#### Report Basis

R = Total Recoverable

T = Total

#### Field Service / Mobile Lab

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#### **Analysis Batch:280-171762**

280-41536-1	DB01E	T	Water	Field Sampling
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#### Report Basis

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-172222</b>					
LCS 280-172222/1	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-172222/2	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-172222/3	Method Blank	T	Water	SM 2540D	
280-41536-1	DB01E	T	Water	SM 2540D	
280-41536-E-4 DU	Duplicate	T	Water	SM 2540D	
<b>Analysis Batch:280-172662</b>					
LCS 280-172662/19	Lab Control Sample	T	Water	350.1	
LCSD 280-172662/20	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-172662/21	Method Blank	T	Water	350.1	
280-41536-1	DB01E	T	Water	350.1	
280-41536-1MS	Matrix Spike	T	Water	350.1	
280-41536-1MSD	Matrix Spike Duplicate	T	Water	350.1	
<b>Prep Batch: 280-172699</b>					
LCS 280-172699/2-A	Lab Control Sample	T	Water	1664A	
LCSD 280-172699/3-A	Lab Control Sample Duplicate	T	Water	1664A	
MB 280-172699/1-A	Method Blank	T	Water	1664A	
280-41536-1	DB01E	T	Water	1664A	
<b>Analysis Batch:280-172745</b>					
LCS 280-172699/2-A	Lab Control Sample	T	Water	1664A	280-172699
LCSD 280-172699/3-A	Lab Control Sample Duplicate	T	Water	1664A	280-172699
MB 280-172699/1-A	Method Blank	T	Water	1664A	280-172699
280-41536-1	DB01E	T	Water	1664A	280-172699
<b>Analysis Batch:280-172873</b>					
LCS 280-172873/3	Lab Control Sample	T	Water	410.4	
LCSD 280-172873/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-172873/5	Method Blank	T	Water	410.4	
280-41536-1	DB01E	T	Water	410.4	
280-41536-F-4 MS	Matrix Spike	T	Water	410.4	
280-41536-F-4 MSD	Matrix Spike Duplicate	T	Water	410.4	

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-173152</b>					
LCS 280-173152/22	Lab Control Sample	T	Water	353.2	
LCS 280-173152/96	Lab Control Sample	T	Water	353.2	
LCSD 280-173152/23	Lab Control Sample Duplicate	T	Water	353.2	
LCSD 280-173152/67	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-173152/21	Method Blank	T	Water	353.2	
MB 280-173152/65	Method Blank	T	Water	353.2	
MB 280-173152/95	Method Blank	T	Water	353.2	
280-41408-B-3 DU	Duplicate	T	Water	353.2	
280-41474-P-1 MS	Matrix Spike	T	Water	353.2	
280-41474-P-1 MSD	Matrix Spike Duplicate	T	Water	353.2	
280-41536-1	DB01E	T	Water	353.2	
<b>Prep Batch: 280-173366</b>					
LCS 280-173366/1-A	Lab Control Sample	T	Water	351.2	
LCSD 280-173366/2-A	Lab Control Sample Duplicate	T	Water	351.2	
MB 280-173366/3-A	Method Blank	T	Water	351.2	
580-38276-A-1-B MS	Matrix Spike	T	Water	351.2	
580-38276-A-1-C MSD	Matrix Spike Duplicate	T	Water	351.2	
280-41536-1	DB01E	T	Water	351.2	
<b>Analysis Batch:280-173404</b>					
LCS 280-173366/1-A	Lab Control Sample	T	Water	351.2	280-173366
LCSD 280-173366/2-A	Lab Control Sample Duplicate	T	Water	351.2	280-173366
MB 280-173366/3-A	Method Blank	T	Water	351.2	280-173366
580-38276-A-1-B MS	Matrix Spike	T	Water	351.2	280-173366
580-38276-A-1-C MSD	Matrix Spike Duplicate	T	Water	351.2	280-173366
280-41536-1	DB01E	T	Water	351.2	280-173366
<b>Prep Batch: 280-173493</b>					
LCS 280-173493/9-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-173493/10-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-173493/11-A	Method Blank	T	Water	365.2/365.3/365	
280-41536-1	DB01E	T	Water	365.2/365.3/365	
280-41650-B-2-B MS	Matrix Spike	T	Water	365.2/365.3/365	
280-41650-B-2-C MSD	Matrix Spike Duplicate	T	Water	365.2/365.3/365	
<b>Analysis Batch:280-173626</b>					
MB 280-173626/1	Method Blank	T	Water	Total Nitrogen	
280-41536-1	DB01E	T	Water	Total Nitrogen	

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-173755</b>					
LCS 280-173493/9-A	Lab Control Sample	T	Water	365.1	280-173493
LCSD 280-173493/10-A	Lab Control Sample Duplicate	T	Water	365.1	280-173493
MB 280-173493/11-A	Method Blank	T	Water	365.1	280-173493
280-41536-1	DB01E	T	Water	365.1	280-173493
280-41650-B-2-B MS	Matrix Spike	T	Water	365.1	280-173493
280-41650-B-2-C MSD	Matrix Spike Duplicate	T	Water	365.1	280-173493

#### Report Basis

T = Total

### HPLC/IC

Analysis Batch:440-101858					
LCS 440-101858/2	Lab Control Sample	T	Water	218.6	
MB 440-101858/3	Method Blank	T	Water	218.6	
280-41536-1	DB01E	D	Water	218.6	
440-45251-M-1 MS	Matrix Spike	T	Water	218.6	
440-45251-M-1 MSD	Matrix Spike Duplicate	T	Water	218.6	

#### Report Basis

D = Dissolved

T = Total

**Quality Control Results**

Client: Waste Management

Job Number: 280-41536-1

**Surrogate Recovery Report****625 Semivolatile Organic Compounds (GC/MS)****Client Matrix: Water**

Lab Sample ID	Client Sample ID	TBP %Rec	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
280-41536-1	DB01E	83	74	78	79	82	83
MB 280-171704/1-A		80	70	85	83	86	104
LCS 280-171704/2-A		92	71	89	85	90	101
LCSD 280-171704/3-A		87	71	83	83	84	99

Surrogate	Acceptance Limits
TBP = 2,4,6-Tribromophenol	50-120
FBP = 2-Fluorobiphenyl	36-120
2FP = 2-Fluorophenol	30-120
NBZ = Nitrobenzene-d5	45-120
PHL = Phenol-d5	36-120
TPH = Terphenyl-d14	52-120

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

**Method Blank - Batch: 280-171704****Method: 625****Preparation: 625**

Lab Sample ID:	MB 280-171704/1-A	Analysis Batch:	280-172261	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-171704	Lab File ID:	D7892.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/02/2013 1042	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	04/29/2013 1125			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Alpha-Terpineol	ND		0.0020	0.010
Benzoic acid	ND		0.010	0.050
p-Cresol	ND		0.00025	0.010
Pentachlorophenol	ND		0.020	0.060
Phenol	ND		0.0020	0.010
Surrogate	% Rec		Acceptance Limits	
2,4,6-Tribromophenol	80		50 - 120	
2-Fluorobiphenyl	70		36 - 120	
2-Fluorophenol	85		30 - 120	
Nitrobenzene-d5	83		45 - 120	
Phenol-d5	86		36 - 120	
Terphenyl-d14	104		52 - 120	

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-171704**

**Method: 625  
Preparation: 625**

LCS Lab Sample ID:	LCS 280-171704/2-A	Analysis Batch:	280-172261	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-171704	Lab File ID:	D7893.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/02/2013 1109	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	04/29/2013 1125			Injection Volume:	0.5 uL
Leach Date:	N/A				

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LCSD Lab Sample ID:	LCSD 280-171704/3-A	Analysis Batch:	280-172261	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-171704	Lab File ID:	D7894.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/02/2013 1136	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	04/29/2013 1125			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec.		RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD				
1,2,4-Trichlorobenzene	72	71	44 - 120	2	35	
1,2-Dichlorobenzene	72	70	32 - 120	3	42	
1,3-Dichlorobenzene	70	68	23 - 120	2	47	
1,4-Dichlorobenzene	69	68	24 - 120	3	49	
2,2'-Oxybis(1-chloropropane)	81	77	37 - 120	5	30	
2,4,6-Trichlorophenol	90	88	51 - 120	2	30	
2,4-Dichlorophenol	92	89	46 - 120	3	30	
2,4-Dimethylphenol	78	71	44 - 119	9	35	
2,4-Dinitrophenol	88	84	20 - 121	5	61	
2,4-Dinitrotoluene	101	98	57 - 120	3	35	
2,6-Dinitrotoluene	97	92	56 - 120	5	30	
2-Chloronaphthalene	81	78	60 - 118	4	30	
2-Chlorophenol	93	85	34 - 120	8	30	
2-Methylphenol	83	82	38 - 120	1	35	
2-Nitrophenol	89	87	47 - 120	2	30	
3,3'-Dichlorobenzidine	48	54	18 - 120	10	50	J
4,6-Dinitro-2-methylphenol	102	96	40 - 120	6	55	
4-Bromophenyl phenyl ether	97	92	53 - 120	5	34	
4-Chloro-3-methylphenol	90	90	57 - 120	0	30	
4-Chlorophenyl phenyl ether	93	90	51 - 120	4	30	
4-Nitrophenol	86	83	53 - 120	3	42	
Acenaphthene	82	81	47 - 120	1	30	
Acenaphthylene	88	85	33 - 120	4	30	
Anthracene	96	92	52 - 120	5	30	
Benzidine	51	56	10 - 218	9	50	J
Benzo[a]anthracene	94	92	54 - 120	2	30	
Benzo[a]pyrene	85	81	39 - 120	5	73	
Benzo[b]fluoranthene	93	87	51 - 120	6	90	
Benzo[g,h,i]perylene	87	84	48 - 120	4	64	
Benzo[k]fluoranthene	90	90	49 - 120	1	50	
Bis(2-chloroethoxy)methane	86	84	50 - 120	3	30	
Bis(2-chloroethyl)ether	84	83	35 - 120	1	30	
Bis(2-ethylhexyl) phthalate	88	88	56 - 120	0	30	
Butyl benzyl phthalate	98	96	53 - 120	2	30	
Chrysene	92	90	51 - 120	1	30	
Dibenz(a,h)anthracene	74	69	45 - 120	7	78	

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-171704**

**Method: 625  
Preparation: 625**

LCS Lab Sample ID:	LCS 280-171704/2-A	Analysis Batch:	280-172261	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-171704	Lab File ID:	D7893.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/02/2013 1109	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	04/29/2013 1125			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-171704/3-A	Analysis Batch:	280-172261	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-171704	Lab File ID:	D7894.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/02/2013 1136	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	04/29/2013 1125			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec.		RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD				
Diethyl phthalate	94	92	59 - 114	2	30	
Dimethyl phthalate	94	91	58 - 112	3	30	
Di-n-butyl phthalate	99	95	57 - 118	5	30	
Di-n-octyl phthalate	94	93	56 - 120	1	30	
Fluoranthene	98	94	58 - 120	5	30	
Fluorene	90	86	59 - 120	4	30	
Hexachlorobenzene	93	87	53 - 120	7	30	
Hexachlorobutadiene	67	66	27 - 116	2	41	
Hexachlorocyclopentadiene	24	24	10 - 120	1	82	J
Hexachloroethane	67	64	40 - 113	6	52	
Indeno[1,2,3-cd]pyrene	85	84	50 - 120	1	73	
Isophorone	85	84	50 - 120	2	30	
Naphthalene	79	76	37 - 120	5	30	
Nitrobenzene	85	83	46 - 120	2	30	
N-Nitrosodimethylamine	84	79	37 - 120	6	30	
N-Nitrosodi-n-propylamine	86	83	50 - 120	3	30	
N-Nitrosodiphenylamine	91	88	46 - 203	4	50	
p-Cresol	94	91	42 - 120	3	39	
Pentachlorophenol	93	90	46 - 120	3	30	
Phenanthrene	98	93	54 - 120	6	30	
Phenol	91	86	37 - 112	5	30	
Pyrene	95	94	55 - 115	1	30	
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits	
2,4,6-Tribromophenol	92		87		50 - 120	
2-Fluorobiphenyl	71		71		36 - 120	
2-Fluorophenol	89		83		30 - 120	
Nitrobenzene-d5	85		83		45 - 120	
Phenol-d5	90		84		36 - 120	
Terphenyl-d14	101		99		52 - 120	

**Quality Control Results**

Client: Waste Management

Job Number: 280-41536-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-171704****Method: 625  
Preparation: 625**

LCS Lab Sample ID:	LCS 280-171704/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-171704/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/02/2013 1109			Analysis Date:	05/02/2013 1136
Prep Date:	04/29/2013 1125			Prep Date:	04/29/2013 1125
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual		
1,2,4-Trichlorobenzene	0.0800	0.0800	0.0579	0.0569		
1,2-Dichlorobenzene	0.0800	0.0800	0.0574	0.0557		
1,3-Dichlorobenzene	0.0800	0.0800	0.0558	0.0547		
1,4-Dichlorobenzene	0.0800	0.0800	0.0555	0.0542		
2,2'-Oxybis(1-chloropropane)	0.0800	0.0800	0.0647	0.0614		
2,4,6-Trichlorophenol	0.0800	0.0800	0.0719	0.0703		
2,4-Dichlorophenol	0.0800	0.0800	0.0735	0.0712		
2,4-Dimethylphenol	0.0800	0.0800	0.0623	0.0568		
2,4-Dinitrophenol	0.0800	0.0800	0.0706	0.0670		
2,4-Dinitrotoluene	0.0800	0.0800	0.0805	0.0785		
2,6-Dinitrotoluene	0.0800	0.0800	0.0774	0.0739		
2-Chloronaphthalene	0.0800	0.0800	0.0651	0.0627		
2-Chlorophenol	0.0800	0.0800	0.0742	0.0684		
2-Methylphenol	0.0800	0.0800	0.0666	0.0660		
2-Nitrophenol	0.0800	0.0800	0.0712	0.0698		
3,3'-Dichlorobenzidine	0.0800	0.0800	0.0388 J	0.0430 J		
4,6-Dinitro-2-methylphenol	0.0800	0.0800	0.0815	0.0768		
4-Bromophenyl phenyl ether	0.0800	0.0800	0.0775	0.0737		
4-Chloro-3-methylphenol	0.0800	0.0800	0.0720	0.0720		
4-Chlorophenyl phenyl ether	0.0800	0.0800	0.0743	0.0716		
4-Nitrophenol	0.0800	0.0800	0.0687	0.0666		
Acenaphthene	0.0800	0.0800	0.0653	0.0646		
Acenaphthylene	0.0800	0.0800	0.0701	0.0677		
Anthracene	0.0800	0.0800	0.0771	0.0735		
Benzidine	0.200	0.200	0.102 J	0.112 J		
Benzo[a]anthracene	0.0800	0.0800	0.0752	0.0738		
Benzo[a]pyrene	0.0800	0.0800	0.0681	0.0651		
Benzo[b]fluoranthene	0.0800	0.0800	0.0740	0.0698		
Benzo[g,h,i]perylene	0.0800	0.0800	0.0696	0.0672		
Benzo[k]fluoranthene	0.0800	0.0800	0.0719	0.0723		
Bis(2-chloroethoxy)methane	0.0800	0.0800	0.0690	0.0668		
Bis(2-chloroethyl)ether	0.0800	0.0800	0.0672	0.0663		
Bis(2-ethylhexyl) phthalate	0.0800	0.0800	0.0706	0.0707		
Butyl benzyl phthalate	0.0800	0.0800	0.0782	0.0766		
Chrysene	0.0800	0.0800	0.0733	0.0724		
Dibenz(a,h)anthracene	0.0800	0.0800	0.0588	0.0549		
Diethyl phthalate	0.0800	0.0800	0.0749	0.0737		
Dimethyl phthalate	0.0800	0.0800	0.0755	0.0729		
Di-n-butyl phthalate	0.0800	0.0800	0.0795	0.0757		

**Quality Control Results**

Client: Waste Management

Job Number: 280-41536-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-171704****Method: 625  
Preparation: 625**

LCS Lab Sample ID:	LCS 280-171704/2-A	Units:	mg/L	LCS Lab Sample ID:	LCSD 280-171704/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/02/2013 1109			Analysis Date:	05/02/2013 1136
Prep Date:	04/29/2013 1125			Prep Date:	04/29/2013 1125
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Di-n-octyl phthalate	0.0800	0.0800	0.0752	0.0743
Fluoranthene	0.0800	0.0800	0.0787	0.0748
Fluorene	0.0800	0.0800	0.0716	0.0686
Hexachlorobenzene	0.0800	0.0800	0.0740	0.0694
Hexachlorobutadiene	0.0800	0.0800	0.0537	0.0527
Hexachlorocyclopentadiene	0.0800	0.0800	0.0192 J	0.0191 J
Hexachloroethane	0.0800	0.0800	0.0540	0.0511
Indeno[1,2,3-cd]pyrene	0.0800	0.0800	0.0676	0.0671
Isophorone	0.0800	0.0800	0.0681	0.0670
Naphthalene	0.0800	0.0800	0.0634	0.0606
Nitrobenzene	0.0800	0.0800	0.0681	0.0667
N-Nitrosodimethylamine	0.0800	0.0800	0.0672	0.0634
N-Nitrosodi-n-propylamine	0.0800	0.0800	0.0685	0.0664
N-Nitrosodiphenylamine	0.0683	0.0683	0.0623	0.0598
p-Cresol	0.160	0.160	0.150	0.145
Pentachlorophenol	0.0800	0.0800	0.0744	0.0723
Phenanthrene	0.0800	0.0800	0.0787	0.0743
Phenol	0.0800	0.0800	0.0726	0.0691
Pyrene	0.0800	0.0800	0.0760	0.0750

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### **Method Blank - Batch: 440-101858**

**Method: 218.6**

**Preparation: N/A**

Lab Sample ID:	MB 440-101858/3	Analysis Batch:	440-101858	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	05/02/2013 0913	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chromium, hexavalent	ND		0.25	1.0

### **Lab Control Sample - Batch: 440-101858**

**Method: 218.6**

**Preparation: N/A**

Lab Sample ID:	LCS 440-101858/2	Analysis Batch:	440-101858	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	05/02/2013 0859	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chromium, hexavalent	50.0	49.4	99	90 - 110	

### **Matrix Spike/**

### **Matrix Spike Duplicate Recovery Report - Batch: 440-101858**

**Method: 218.6**

**Preparation: N/A**

MS Lab Sample ID:	440-45251-M-1 MS	Analysis Batch:	440-101858	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	05/02/2013 2242			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	440-45251-M-1 MSD	Analysis Batch:	440-101858	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	05/02/2013 2256			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chromium, hexavalent	99	100	90 - 110	2	10		

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 440-101858**

**Method: 218.6  
Preparation: N/A**

MS Lab Sample ID:	440-45251-M-1 MS	Units:	ug/L	MSD Lab Sample ID:	440-45251-M-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/02/2013 2242			Analysis Date:	05/02/2013 2256
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chromium, hexavalent	ND	50.0	50.0	49.4	50.1

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### Method Blank - Batch: 280-171772

**Method: 200.7 Rev 4.4**

**Preparation: 200.7**

**Total Recoverable**

Lab Sample ID:	MB 280-171772/1-A	Analysis Batch:	280-172260	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-171772	Lab File ID:	25A3050113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	05/01/2013 1824	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	05/01/2013 0800				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	ND		0.022	0.10
Lead	ND		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	ND		0.0045	0.020
Silver	ND		0.00093	0.010

### Lab Control Sample - Batch: 280-171772

**Method: 200.7 Rev 4.4**

**Preparation: 200.7**

**Total Recoverable**

Lab Sample ID:	LCS 280-171772/2-A	Analysis Batch:	280-172260	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-171772	Lab File ID:	25A3050113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	05/01/2013 1827	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	05/01/2013 0800				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	0.996	100	88 - 110	
Cadmium	0.100	0.105	105	88 - 111	
Iron	1.00	0.956	96	89 - 115	
Lead	0.500	0.499	100	89 - 110	
Selenium	2.00	2.11	106	85 - 112	
Zinc	0.500	0.521	104	85 - 111	
Silver	0.0500	0.0499	100	85 - 115	

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-171772**

**Method: 200.7 Rev 4.4  
Preparation: 200.7  
Total Recoverable**

MS Lab Sample ID:	280-41483-A-1-B MS	Analysis Batch:	280-172260	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-171772	Lab File ID:	25A3050113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	05/01/2013 1834			Final Weight/Volume:	50 mL
Prep Date:	05/01/2013 0800				
Leach Date:	N/A				

MSD Lab Sample ID:	280-41483-A-1-C MSD	Analysis Batch:	280-172260	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-171772	Lab File ID:	25A3050113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	05/01/2013 1836			Final Weight/Volume:	50 mL
Prep Date:	05/01/2013 0800				
Leach Date:	N/A				

Analyte	% Rec.						
	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	99	95	88 - 110	4	20		
Cadmium	103	99	88 - 111	4	20		
Iron	93	89	89 - 115	4	20		
Lead	91	88	89 - 110	3	20		F
Selenium	106	102	85 - 112	4	20		
Zinc	104	99	85 - 111	5	20		
Silver	99	94	85 - 115	5	20		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-171772**

**Method: 200.7 Rev 4.4  
Preparation: 200.7  
Total Recoverable**

MS Lab Sample ID:	280-41483-A-1-B MS	Units:	mg/L	MSD Lab Sample ID:	280-41483-A-1-C MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/01/2013 1834			Analysis Date:	05/01/2013 1836
Prep Date:	05/01/2013 0800			Prep Date:	05/01/2013 0800
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike	MSD Spike	MS	MSD
		Amount	Amount	Result/Qual	Result/Qual
Arsenic	ND	1.00	1.00	0.988	0.951
Cadmium	ND	0.100	0.100	0.103	0.0989
Iron	0.31	1.00	1.00	1.24	1.20
Lead	ND	0.500	0.500	0.457	0.442
Selenium	ND	2.00	2.00	2.12	2.04
Zinc	0.017 J	0.500	0.500	0.536	0.512
Silver	ND	0.0500	0.0500	0.0495	0.0470

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

**Method Blank - Batch: 280-172077****Method: 245.1****Preparation: 245.1**

Lab Sample ID:	MB 280-172077/1-A	Analysis Batch:	280-172464	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-172077	Lab File ID:	130502ac.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	05/02/2013 1557	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	05/02/2013 1200				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000027	0.00020

**Lab Control Sample - Batch: 280-172077****Method: 245.1****Preparation: 245.1**

Lab Sample ID:	LCS 280-172077/2-A	Analysis Batch:	280-172464	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-172077	Lab File ID:	130502ac.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	05/02/2013 1600	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	05/02/2013 1200				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00502	100	90 - 110	

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-172077****Method: 245.1****Preparation: 245.1**

MS Lab Sample ID:	280-41536-H-3-C MS	Analysis Batch:	280-172464	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-172077	Lab File ID:	130502ac.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	05/02/2013 1609			Final Weight/Volume:	30 mL
Prep Date:	05/02/2013 1200				
Leach Date:	N/A				

MSD Lab Sample ID:	280-41536-H-3-D MSD	Analysis Batch:	280-172464	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-172077	Lab File ID:	130502ac.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	05/02/2013 1611			Final Weight/Volume:	30 mL
Prep Date:	05/02/2013 1200				
Leach Date:	N/A				

Analyte	% Rec.		RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD				
Mercury	99	100	80 - 120	1	10	

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-172077**

**Method: 245.1  
Preparation: 245.1**

MS Lab Sample ID:	280-41536-H-3-C MS	Units:	mg/L	MSD Lab Sample ID:	280-41536-H-3-D MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/02/2013 1609			Analysis Date:	05/02/2013 1611
Prep Date:	05/02/2013 1200			Prep Date:	05/02/2013 1200
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	0.00065	0.00500	0.00500	0.00559	0.00563

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### Method Blank - Batch: 280-172699

#### Method: 1664A

#### Preparation: 1664A

Lab Sample ID:	MB 280-172699/1-A	Analysis Batch:	280-172745	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-172699	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/04/2013 1343	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	05/04/2013 0923				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
HEM	ND		1.6	5.0

### Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-172699

#### Method: 1664A

#### Preparation: 1664A

LCSD Lab Sample ID:	LCS 280-172699/2-A	Analysis Batch:	280-172745	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-172699	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/04/2013 1343	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	05/04/2013 0923				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-172699/3-A	Analysis Batch:	280-172745	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-172699	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/04/2013 1343	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	05/04/2013 0923				
Leach Date:	N/A				

Analyte	% Rec.		RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD				
HEM	91	91	81 - 107	0	22	

### Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-172699

#### Method: 1664A

#### Preparation: 1664A

LCS Lab Sample ID:	LCS 280-172699/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-172699/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/04/2013 1343			Analysis Date:	05/04/2013 1343
Prep Date:	05/04/2013 0923			Prep Date:	05/04/2013 0923
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
HEM	40.0	40.0	36.3	36.4

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### **Method Blank - Batch: 280-172662**

**Method: 350.1**  
**Preparation: N/A**

Lab Sample ID:	MB 280-172662/21	Analysis Batch:	280-172662	Instrument ID:	WC_AlP 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\050313A.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/03/2013 1357	Units:	mg/L	Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Ammonia	ND		0.022	0.10

### **Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-172662**

**Method: 350.1**  
**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-172662/19	Analysis Batch:	280-172662	Instrument ID:	WC_AlP 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\050313A.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/03/2013 1353	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-172662/20	Analysis Batch:	280-172662	Instrument ID:	WC_AlP 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\050313A.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/03/2013 1355	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	<u>% Rec.</u>		RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD				
Ammonia	100	100	90 - 110	0	10	

### **Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-172662**

**Method: 350.1**  
**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-172662/19	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-172662/20
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/03/2013 1353			Analysis Date:	05/03/2013 1355
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia	2.50	2.50	2.51	2.50

**Quality Control Results**

Client: Waste Management

Job Number: 280-41536-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-172662****Method: 350.1****Preparation: N/A**

MS Lab Sample ID:	280-41536-1	Analysis Batch:	280-172662	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\050313A.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/03/2013 1517			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-41536-1	Analysis Batch:	280-172662	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\050313A.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/03/2013 1519			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia	104	103	90 - 110	1	10		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-172662****Method: 350.1****Preparation: N/A**

MS Lab Sample ID:	280-41536-1	Units:	mg/L	MSD Lab Sample ID:	280-41536-1
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/03/2013 1517			Analysis Date:	05/03/2013 1519
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
	Result	Qual				
Ammonia	0.038	J	1.00	1.00	1.08	1.07

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### **Method Blank - Batch: 280-173366**

**Method: 351.2**

**Preparation: 351.2**

Lab Sample ID:	MB 280-173366/3-A	Analysis Batch:	280-173404	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-173366	Lab File ID:	050813TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	05/08/2013 2306	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	05/07/2013 1721				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Kjeldahl	ND		0.18	0.50

### **Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-173366**

**Method: 351.2**

**Preparation: 351.2**

LCS Lab Sample ID:	LCS 280-173366/1-A	Analysis Batch:	280-173404	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-173366	Lab File ID:	050813TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	05/08/2013 2304	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	05/07/2013 1721				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-173366/2-A	Analysis Batch:	280-173404	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-173366	Lab File ID:	050813TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	05/08/2013 2305	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	05/07/2013 1721				
Leach Date:	N/A				

Analyte	<u>% Rec.</u>		RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD				
Nitrogen, Kjeldahl	95	96	90 - 110	1	25	

### **Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-173366**

**Method: 351.2**

**Preparation: 351.2**

LCS Lab Sample ID:	LCS 280-173366/1-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-173366/2-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/08/2013 2304			Analysis Date:	05/08/2013 2305
Prep Date:	05/07/2013 1721			Prep Date:	05/07/2013 1721
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrogen, Kjeldahl	6.00	6.00	5.70	5.74

**Quality Control Results**

Client: Waste Management

Job Number: 280-41536-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-173366****Method: 351.2  
Preparation: 351.2**

MS Lab Sample ID:	580-38276-A-1-B MS	Analysis Batch:	280-173404	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-173366	Lab File ID:	050813TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	05/08/2013 2315			Final Weight/Volume:	25 mL
Prep Date:	05/07/2013 1721				
Leach Date:	N/A				

MSD Lab Sample ID:	580-38276-A-1-C MSD	Analysis Batch:	280-173404	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-173366	Lab File ID:	050813TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	05/08/2013 2319			Final Weight/Volume:	25 mL
Prep Date:	05/07/2013 1721				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Nitrogen, Kjeldahl	94	96	90 - 110	2	25		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-173366****Method: 351.2  
Preparation: 351.2**

MS Lab Sample ID:	580-38276-A-1-B MS	Units:	mg/L	MSD Lab Sample ID:	580-38276-A-1-C MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/08/2013 2315			Analysis Date:	05/08/2013 2319
Prep Date:	05/07/2013 1721			Prep Date:	05/07/2013 1721
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
	Result/Qual					
Nitrogen, Kjeldahl	0.38	J	3.00	3.00	3.20	3.27

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

**Method Blank - Batch: 280-173152****Method: 353.2****Preparation: N/A**

Lab Sample ID:	MB 280-173152/21	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/07/2013 1350	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

**Method Blank - Batch: 280-173152****Method: 353.2****Preparation: N/A**

Lab Sample ID:	MB 280-173152/65	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/07/2013 1456	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

**Method Blank - Batch: 280-173152****Method: 353.2****Preparation: N/A**

Lab Sample ID:	MB 280-173152/95	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/07/2013 1541	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### Method Reporting Limit Check - Batch: 280-173152

**Method: 353.2**

**Preparation: N/A**

Lab Sample ID:	MRL 280-173152/18	Analysis Batch:	280-173152	Instrument ID:	WC_AlP 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/07/2013 1345	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N	0.100	0.0890	89	50 - 150	J

### Lab Control Sample - Batch: 280-173152

**Method: 353.2**

**Preparation: N/A**

Lab Sample ID:	LCS 280-173152/96	Analysis Batch:	280-173152	Instrument ID:	WC_AlP 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/07/2013 1542	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N	5.00	5.35	107	90 - 110	

### Lab Control Sample/

### Lab Control Sample Duplicate Recovery Report - Batch: 280-173152

**Method: 353.2**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-173152/22	Analysis Batch:	280-173152	Instrument ID:	WC_AlP 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/07/2013 1351	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-173152/23	Analysis Batch:	280-173152	Instrument ID:	WC_AlP 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/07/2013 1353	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD				
Nitrate Nitrite as N	103	104	90 - 110	1	10	

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-173152

**Method: 353.2**  
**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-173152/22	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-173152/23
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/07/2013 1351			Analysis Date:	05/07/2013 1353
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrate Nitrite as N	5.00	5.00	5.16	5.20

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-173152

**Method: 353.2**  
**Preparation: N/A**

MS Lab Sample ID:	280-41474-P-1 MS	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	05/07/2013 1412			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-41474-P-1 MSD	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	05/07/2013 1414			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Nitrate Nitrite as N	104	103	90 - 110	1	10		

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-173152

**Method: 353.2**  
**Preparation: N/A**

MS Lab Sample ID:	280-41474-P-1 MS	Units:	mg/L	MSD Lab Sample ID:	280-41474-P-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/07/2013 1412			Analysis Date:	05/07/2013 1414
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Nitrate Nitrite as N	ND	4.00	4.00	4.16	4.12

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

**Duplicate - Batch: 280-173152**

**Method: 353.2**

**Preparation: N/A**

Lab Sample ID:	280-41408-B-3 DU	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/07/2013 1548	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Nitrate Nitrite as N	6.0	5.98	0.2	20	

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### Method Blank - Batch: 280-173493

**Method: 365.1**

**Preparation: 365.2/365.3/365**

Lab Sample ID:	MB 280-173493/11-A	Analysis Batch:	280-173755	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-173493	Lab File ID:	051013tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	05/10/2013 1414	Units:	mg/L	Final Weight/Volume:	50.0 mL
Prep Date:	05/09/2013 1137				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Phosphorus, Total	ND		0.0050	0.050

### Laboratory Control Sample/

### Laboratory Control Sample Duplicate Recovery Report - Batch: 280-173493

**Method: 365.1**

**Preparation: 365.2/365.3/365**

LCS Lab Sample ID:	LCS 280-173493/9-A	Analysis Batch:	280-173755	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-173493	Lab File ID:	051013tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	05/10/2013 1414	Units:	mg/L	Final Weight/Volume:	50.0 mL
Prep Date:	05/09/2013 1137				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-173493/10-A	Analysis Batch:	280-173755	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-173493	Lab File ID:	051013tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	05/10/2013 1459	Units:	mg/L	Final Weight/Volume:	50.0 mL
Prep Date:	05/09/2013 1137				
Leach Date:	N/A				

Analyte	% Rec.		RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD				
Phosphorus, Total	99	99	90 - 110	0	10	

### Laboratory Control/

### Laboratory Duplicate Data Report - Batch: 280-173493

**Method: 365.1**

**Preparation: 365.2/365.3/365**

LCS Lab Sample ID:	LCS 280-173493/9-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-173493/10-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/10/2013 1414			Analysis Date:	05/10/2013 1459
Prep Date:	05/09/2013 1137			Prep Date:	05/09/2013 1137
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Phosphorus, Total	0.500	0.500	0.493	0.494

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-173493

**Method: 365.1**  
**Preparation: 365.2/365.3/365**

MS Lab Sample ID:	280-41650-B-2-B MS	Analysis Batch:	280-173755	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-173493	Lab File ID:	051013tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	05/10/2013 1440			Final Weight/Volume:	50.0 mL
Prep Date:	05/09/2013 1137				
Leach Date:	N/A				

MSD Lab Sample ID:	280-41650-B-2-C MSD	Analysis Batch:	280-173755	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-173493	Lab File ID:	051013tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	05/10/2013 1440			Final Weight/Volume:	50.0 mL
Prep Date:	05/09/2013 1137				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Phosphorus, Total	66	70	90 - 110	6	10	F	F

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-173493

**Method: 365.1**  
**Preparation: 365.2/365.3/365**

MS Lab Sample ID:	280-41650-B-2-B MS	Units:	mg/L	MSD Lab Sample ID:	280-41650-B-2-C MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/10/2013 1440			Analysis Date:	05/10/2013 1440
Prep Date:	05/09/2013 1137			Prep Date:	05/09/2013 1137
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike	MSD Spike	MS Result/Qual	MSD
		Amount	Amount		Result/Qual
Phosphorus, Total	ND	0.500	0.500	0.330 F	0.349 F

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### Method Blank - Batch: 280-172873

**Method: 410.4**

**Preparation: N/A**

Lab Sample ID:	MB 280-172873/5	Analysis Batch:	280-172873	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2 mL
Analysis Date:	05/06/2013 1025	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chemical Oxygen Demand	ND		4.1	20

### Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-172873

**Method: 410.4**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-172873/3	Analysis Batch:	280-172873	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/06/2013 1025	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-172873/4	Analysis Batch:	280-172873	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/06/2013 1025	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD				
Chemical Oxygen Demand	104	102	90 - 110	2	11	

### Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-172873

**Method: 410.4**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-172873/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-172873/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/06/2013 1025			Analysis Date:	05/06/2013 1025
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chemical Oxygen Demand	100	100	104	102

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-172873**

**Method: 410.4**

**Preparation: N/A**

MS Lab Sample ID:	280-41536-F-4 MS	Analysis Batch:	280-172873	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/06/2013 1025			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-41536-F-4 MSD	Analysis Batch:	280-172873	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/06/2013 1025			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chemical Oxygen Demand	77	80	90 - 110	2	11	F	F

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-172873**

**Method: 410.4**

**Preparation: N/A**

MS Lab Sample ID:	280-41536-F-4 MS	Units:	mg/L	MSD Lab Sample ID:	280-41536-F-4 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/06/2013 1025			Analysis Date:	05/06/2013 1025
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample	MS Spike	MSD Spike	MS	MSD
	Result/Qual	Amount	Amount	Result/Qual	Result/Qual
Chemical Oxygen Demand	41	50.0	50.0	79.6	F
				81.3	F

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### Method Blank - Batch: 280-172222

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	MB 280-172222/3	Analysis Batch:	280-172222	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	05/01/2013 1705	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Suspended Solids	ND		1.1	4.0

### Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-172222

**Method: SM 2540D**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-172222/1	Analysis Batch:	280-172222	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/01/2013 1705	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-172222/2	Analysis Batch:	280-172222	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/01/2013 1705	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD				
Total Suspended Solids	90	91	86 - 114	1	20	

### Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-172222

**Method: SM 2540D**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-172222/1	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-172222/2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/01/2013 1705			Analysis Date:	05/01/2013 1705
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Suspended Solids	100	100	90.0	91.0

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

**Duplicate - Batch: 280-172222**

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	280-41536-E-4 DU	Analysis Batch:	280-172222	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	75 mL
Analysis Date:	05/01/2013 1705	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	270	287	7	10	

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

**Method Blank - Batch: 280-173626**

**Method: Total Nitrogen**

**Preparation: N/A**

Lab Sample ID:	MB 280-173626/1	Analysis Batch:	280-173626	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/10/2013 0729	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Total	ND		0.042	0.10

# Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

## Laboratory Chronicle

**Lab ID:** 280-41536-1

**Client ID:** DB01E

Sample Date/Time: 04/24/2013 12:05 Received Date/Time: 04/27/2013 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-41536-C-1-A	280-172261	280-171704	04/29/2013 11:25	1	TAL DEN	DFB	
A:625	280-41536-C-1-A	280-172261	280-171704	05/02/2013 20:04	1	TAL DEN	MGH	
A:218.6	280-41536-I-1	440-101858		05/03/2013 01:02	1	TAL IRV	RW	
P:200.7	280-41536-H-1-A	280-172260	280-171772	05/01/2013 08:00	1	TAL DEN	JA	
A:200.7 Rev 4.4	280-41536-H-1-A	280-172260	280-171772	05/01/2013 18:57	1	TAL DEN	JKH	
P:245.1	280-41536-H-1-B	280-172464	280-172077	05/02/2013 12:00	1	TAL DEN	NF	
A:245.1	280-41536-H-1-B	280-172464	280-172077	05/02/2013 16:02	1	TAL DEN	NF	
P:1664A	280-41536-A-1-A	280-172745	280-172699	05/04/2013 09:23	1	TAL DEN	AFB	
A:1664A	280-41536-A-1-A	280-172745	280-172699	05/04/2013 13:43	1	TAL DEN	AFB	
A:350.1	280-41536-F-1	280-172662		05/03/2013 15:14	1	TAL DEN	DE	
P:351.2	280-41536-F-1-A	280-173404	280-173366	05/07/2013 17:21	1	TAL DEN	MW	
A:351.2	280-41536-F-1-A	280-173404	280-173366	05/08/2013 23:22	1	TAL DEN	MW	
A:353.2	280-41536-G-1	280-173152		05/07/2013 14:41	1	TAL DEN	SJS	
P:365.2/365.3/365	280-41536-F-1-B	280-173755	280-173493	05/09/2013 11:37	1	TAL DEN	SJS	
A:365.1	280-41536-F-1-B	280-173755	280-173493	05/10/2013 14:36	1	TAL DEN	SJS	
A:410.4	280-41536-G-1	280-172873		05/06/2013 10:25	1	TAL DEN	DFB	
A:SM 2540D	280-41536-E-1	280-172222		05/01/2013 17:05	1	TAL DEN	MW	
A:Total Nitrogen	280-41536-A-1	280-173626		05/10/2013 07:29	1	TAL DEN	RS	
A:Field Sampling	280-41536-A-1	280-171762		04/24/2013 12:05	1	TAL DEN	FS	

**Lab ID:** 280-41536-1 MS

**Client ID:** DB01E

Sample Date/Time: 04/24/2013 12:05 Received Date/Time: 04/27/2013 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-41536-F-1 MS	280-172662			05/03/2013 15:17	1	TAL DEN	DE

**Lab ID:** 280-41536-1 MSD

**Client ID:** DB01E

Sample Date/Time: 04/24/2013 12:05 Received Date/Time: 04/27/2013 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-41536-F-1 MSD	280-172662			05/03/2013 15:19	1	TAL DEN	DE

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### Laboratory Chronicle

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	MB 280-171704/1-A	280-172261	280-171704	04/29/2013 11:25	1	TAL DEN	DFB	
A:625	MB 280-171704/1-A	280-172261	280-171704	05/02/2013 10:42	1	TAL DEN	MGH	
A:218.6	MB 440-101858/3	440-101858		05/02/2013 09:13	1	TAL IRV	RW	
P:200.7	MB 280-171772/1-A	280-172260	280-171772	05/01/2013 08:00	1	TAL DEN	JA	
A:200.7 Rev 4.4	MB 280-171772/1-A	280-172260	280-171772	05/01/2013 18:24	1	TAL DEN	JKH	
P:245.1	MB 280-172077/1-A	280-172464	280-172077	05/02/2013 12:00	1	TAL DEN	NF	
A:245.1	MB 280-172077/1-A	280-172464	280-172077	05/02/2013 15:57	1	TAL DEN	NF	
P:1664A	MB 280-172699/1-A	280-172745	280-172699	05/04/2013 09:23	1	TAL DEN	AFB	
A:1664A	MB 280-172699/1-A	280-172745	280-172699	05/04/2013 13:43	1	TAL DEN	AFB	
A:350.1	MB 280-172662/21	280-172662		05/03/2013 13:57	1	TAL DEN	DE	
P:351.2	MB 280-173366/3-A	280-173404	280-173366	05/07/2013 17:21	1	TAL DEN	MW	
A:351.2	MB 280-173366/3-A	280-173404	280-173366	05/08/2013 23:06	1	TAL DEN	MW	
A:353.2	MB 280-173152/21	280-173152		05/07/2013 13:50	1	TAL DEN	SJS	
A:353.2	MB 280-173152/65	280-173152		05/07/2013 14:56	1	TAL DEN	SJS	
A:353.2	MB 280-173152/95	280-173152		05/07/2013 15:41	1	TAL DEN	SJS	
P:365.2/365.3/365	MB 280-173493/11-A	280-173755	280-173493	05/09/2013 11:37	1	TAL DEN	SJS	
A:365.1	MB 280-173493/11-A	280-173755	280-173493	05/10/2013 14:14	1	TAL DEN	SJS	
A:410.4	MB 280-172873/5	280-172873		05/06/2013 10:25	1	TAL DEN	DFB	
A:SM 2540D	MB 280-172222/3	280-172222		05/01/2013 17:05	1	TAL DEN	MW	
A:Total Nitrogen	MB 280-173626/1	280-173626		05/10/2013 07:29	1	TAL DEN	RS	

# Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

## Laboratory Chronicle

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCS 280-171704/2-A	280-172261	280-171704	04/29/2013 11:25	1	TAL DEN	DFB	
A:625	LCS 280-171704/2-A	280-172261	280-171704	05/02/2013 11:09	1	TAL DEN	MGH	
A:218.6	LCS 440-101858/2	440-101858		05/02/2013 08:59	1	TAL IRV	RW	
P:200.7	LCS 280-171772/2-A	280-172260	280-171772	05/01/2013 08:00	1	TAL DEN	JA	
A:200.7 Rev 4.4	LCS 280-171772/2-A	280-172260	280-171772	05/01/2013 18:27	1	TAL DEN	JKH	
P:245.1	LCS 280-172077/2-A	280-172464	280-172077	05/02/2013 12:00	1	TAL DEN	NF	
A:245.1	LCS 280-172077/2-A	280-172464	280-172077	05/02/2013 16:00	1	TAL DEN	NF	
P:1664A	LCS 280-172699/2-A	280-172745	280-172699	05/04/2013 09:23	1	TAL DEN	AFB	
A:1664A	LCS 280-172699/2-A	280-172745	280-172699	05/04/2013 13:43	1	TAL DEN	AFB	
A:350.1	LCS 280-172662/19	280-172662		05/03/2013 13:53	1	TAL DEN	DE	
P:351.2	LCS 280-173366/1-A	280-173404	280-173366	05/07/2013 17:21	1	TAL DEN	MW	
A:351.2	LCS 280-173366/1-A	280-173404	280-173366	05/08/2013 23:04	1	TAL DEN	MW	
A:353.2	LCS 280-173152/22	280-173152		05/07/2013 13:51	1	TAL DEN	SJS	
A:353.2	LCS 280-173152/96	280-173152		05/07/2013 15:42	1	TAL DEN	SJS	
P:365.2/365.3/36	LCS 280-173493/9-A	280-173755	280-173493	05/09/2013 11:37	1	TAL DEN	SJS	
5								
A:365.1	LCS 280-173493/9-A	280-173755	280-173493	05/10/2013 14:14	1	TAL DEN	SJS	
A:410.4	LCS 280-172873/3	280-172873		05/06/2013 10:25	1	TAL DEN	DFB	
A:SM 2540D	LCS 280-172222/1	280-172222		05/01/2013 17:05	1	TAL DEN	MW	

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCSD 280-171704/3-A	280-172261	280-171704	04/29/2013 11:25	1	TAL DEN	DFB	
A:625	LCSD 280-171704/3-A	280-172261	280-171704	05/02/2013 11:36	1	TAL DEN	MGH	
P:1664A	LCSD 280-172699/3-A	280-172745	280-172699	05/04/2013 09:23	1	TAL DEN	AFB	
A:1664A	LCSD 280-172699/3-A	280-172745	280-172699	05/04/2013 13:43	1	TAL DEN	AFB	
A:350.1	LCSD 280-172662/20	280-172662		05/03/2013 13:55	1	TAL DEN	DE	
P:351.2	LCSD 280-173366/2-A	280-173404	280-173366	05/07/2013 17:21	1	TAL DEN	MW	
A:351.2	LCSD 280-173366/2-A	280-173404	280-173366	05/08/2013 23:05	1	TAL DEN	MW	
A:353.2	LCSD 280-173152/23	280-173152		05/07/2013 13:53	1	TAL DEN	SJS	
A:353.2	LCSD 280-173152/67	280-173152		05/07/2013 14:59	1	TAL DEN	SJS	
P:365.2/365.3/36	LCSD 280-173493/10-A	280-173755	280-173493	05/09/2013 11:37	1	TAL DEN	SJS	
5								
A:365.1	LCSD 280-173493/10-A	280-173755	280-173493	05/10/2013 14:59	1	TAL DEN	SJS	
A:410.4	LCSD 280-172873/4	280-172873		05/06/2013 10:25	1	TAL DEN	DFB	
A:SM 2540D	LCSD 280-172222/2	280-172222		05/01/2013 17:05	1	TAL DEN	MW	

# Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

## Laboratory Chronicle

Lab ID: MRL

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:353.2	MRL 280-173152/18		280-173152		05/07/2013 13:45	1	TAL DEN	SJS

Lab ID: MS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-45251-M-1 MS		440-101858		05/02/2013 22:42	1	TAL IRV	RW
P:200.7	280-41483-A-1-B MS	280-172260	280-171772	05/01/2013 08:00	1	TAL DEN	JA	
A:200.7 Rev 4.4	280-41483-A-1-B MS	280-172260	280-171772	05/01/2013 18:34	1	TAL DEN	JKH	
P:245.1	280-41536-H-3-C MS	280-172464	280-172077	05/02/2013 12:00	1	TAL DEN	NF	
A:245.1	280-41536-H-3-C MS	280-172464	280-172077	05/02/2013 16:09	1	TAL DEN	NF	
P:351.2	580-38276-A-1-B MS	280-173404	280-173366	05/07/2013 17:21	1	TAL DEN	MW	
A:351.2	580-38276-A-1-B MS	280-173404	280-173366	05/08/2013 23:15	1	TAL DEN	MW	
A:353.2	280-41474-P-1 MS	280-173152		05/07/2013 14:12	1	TAL DEN	SJS	
P:365.2/365.3/365	280-41650-B-2-B MS	280-173755	280-173493	05/09/2013 11:37	1	TAL DEN	SJS	
A:365.1	280-41650-B-2-B MS	280-173755	280-173493	05/10/2013 14:40	1	TAL DEN	SJS	
A:410.4	280-41536-F-4 MS	280-172873		05/06/2013 10:25	1	TAL DEN	DFB	

Lab ID: MSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-45251-M-1 MSD		440-101858		05/02/2013 22:56	1	TAL IRV	RW
P:200.7	280-41483-A-1-C MSD	280-172260	280-171772	05/01/2013 08:00	1	TAL DEN	JA	
A:200.7 Rev 4.4	280-41483-A-1-C MSD	280-172260	280-171772	05/01/2013 18:36	1	TAL DEN	JKH	
P:245.1	280-41536-H-3-D MSD	280-172464	280-172077	05/02/2013 12:00	1	TAL DEN	NF	
A:245.1	280-41536-H-3-D MSD	280-172464	280-172077	05/02/2013 16:11	1	TAL DEN	NF	
P:351.2	580-38276-A-1-C MSD	280-173404	280-173366	05/07/2013 17:21	1	TAL DEN	MW	
A:351.2	580-38276-A-1-C MSD	280-173404	280-173366	05/08/2013 23:19	1	TAL DEN	MW	
A:353.2	280-41474-P-1 MSD	280-173152		05/07/2013 14:14	1	TAL DEN	SJS	
P:365.2/365.3/3655	280-41650-B-2-C MSD	280-173755	280-173493	05/09/2013 11:37	1	TAL DEN	SJS	
A:365.1	280-41650-B-2-C MSD	280-173755	280-173493	05/10/2013 14:40	1	TAL DEN	SJS	
A:410.4	280-41536-F-4 MSD	280-172873		05/06/2013 10:25	1	TAL DEN	DFB	

## Quality Control Results

Client: Waste Management

Job Number: 280-41536-1

### Laboratory Chronicle

Lab ID: DU

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:353.2	280-41408-B-3 DU		280-173152		05/07/2013 15:48	1	TAL DEN	SJS
A:SM 2540D	280-41536-E-4 DU		280-172222		05/01/2013 17:05	1	TAL DEN	MW

#### Lab References:

TAL DEN = TestAmerica Denver

TAL IRV = TestAmerica Irvine

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Honolulu

99-193 Aiea Heights Drive, Suite 121

Aiea, HI 96701

Tel: 808-486-5227

TestAmerica Job ID: HWE0001

Client Project/Site: 60287037.02

Client Project Description: AECOM, W GSL STORMWATER

For:

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Attn: Betsy Sarah

*Kristie Reilly*

---

Authorized for release by:

5/6/2013 10:50:13 AM

Kristie Reilly

Project Manager

[Kristie.Brachmann@testamericainc.com](mailto:Kristie.Brachmann@testamericainc.com)

### LINKS

Review your project  
results through

TotalAccess

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Definitions/Glossary

Client: TestAmerica Denver  
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.	1
□	Listed under the "D" column to designate that the result is reported on a dry weight basis	2
%R	Percent Recovery	3
CNF	Contains no Free Liquid	4
DER	Duplicate error ratio (normalized absolute difference)	5
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	6
DLC	Decision level concentration	7
MDA	Minimum detectable activity	8
EDL	Estimated Detection Limit	9
MDC	Minimum detectable concentration	10
MDL	Method Detection Limit	11
ML	Minimum Level (Dioxin)	12
ND	Not detected at the reporting limit (or MDL or EDL if shown)	13
PQL	Practical Quantitation Limit	
QC	Quality Control	
RER	Relative error ratio	
RL	Reporting Limit or Requested Limit (Radiochemistry)	
RPD	Relative Percent Difference, a measure of the relative difference between two points	
TEF	Toxicity Equivalent Factor (Dioxin)	
TEQ	Toxicity Equivalent Quotient (Dioxin)	

## Case Narrative

Client: TestAmerica Denver  
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

### Job ID: HWE0001

Laboratory: TestAmerica Honolulu

#### Narrative

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory unless otherwise stated in the report. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample(s) analyzed.

The Chain(s) of Custody are included and are an integral part of this report. This entire report was reviewed and approved for release.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(808)486-5227

#### LABORATORY REPORT

At sample receipt, the cooler/sample was 1.2 degrees C.

NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

## Sample Summary

Client: TestAmerica Denver  
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HWE0001-01	280-41536-1-1/DB01E	Water - NonPotable	04/24/13 12:05	04/24/13 14:30

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TestAmerica Honolulu

## Detection Summary

Client: TestAmerica Denver  
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

**Client Sample ID: 280-41536-1-1/DB01E**

**Lab Sample ID: HWE0001-01**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	2.44		2.00		mg/L	1.00		SM5210B	Total

This Detection Summary does not include radiochemical test results.

TestAmerica Honolulu

# Client Sample Results

Client: TestAmerica Denver  
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

**Client Sample ID: 280-41536-1-1/DB01E**

**Lab Sample ID: HWE0001-01**

Date Collected: 04/24/13 12:05  
Date Received: 04/24/13 14:30

Matrix: Water - NonPotable

## Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	2.44		2.00		mg/L		04/25/13 14:57	04/30/13 15:12	1.00

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TestAmerica Honolulu

# QC Sample Results

Client: TestAmerica Denver  
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

## Method: SM5210B - General Chemistry Parameters

**Lab Sample ID: 13D0030-BLK1**

**Matrix: Water - NonPotable**

**Analysis Batch: 13D0030**

**Client Sample ID: Method Blank**

**Prep Type: Total**

**Prep Batch: 13D0030\_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND		2.00		mg/L		04/25/13 14:39	04/30/13 14:55	1.00

**Lab Sample ID: 13D0030-BS1**

**Matrix: Water - NonPotable**

**Analysis Batch: 13D0030**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total**

**Prep Batch: 13D0030\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
BOD - 5 Day	198	182		mg/L		92	85 - 115

**Lab Sample ID: 13D0030-DUP1**

**Matrix: Water - NonPotable**

**Analysis Batch: 13D0030**

**Client Sample ID: Duplicate**

**Prep Type: Total**

**Prep Batch: 13D0030\_P**

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	Limit
BOD - 5 Day	2.66		2.93		mg/L		10	20

# QC Association Summary

Client: TestAmerica Denver  
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

## WetChem

### Analysis Batch: 13D0030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13D0030-BLK1	Method Blank	Total	Water - NonPotable	SM5210B	13D0030_P
13D0030-BS1	Lab Control Sample	Total	Water - NonPotable	SM5210B	13D0030_P
13D0030-DUP1	Duplicate	Total	Water - NonPotable	SM5210B	13D0030_P
HWE0001-01	280-41536-1-1/DB01E	Total	Water - NonPotable	SM5210B	13D0030_P

### Prep Batch: 13D0030\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13D0030-BLK1	Method Blank	Total	Water - NonPotable	Default Prep GenChem	13D0030_P
13D0030-BS1	Lab Control Sample	Total	Water - NonPotable	Default Prep GenChem	13D0030_P
13D0030-DUP1	Duplicate	Total	Water - NonPotable	Default Prep GenChem	13D0030_P
HWE0001-01	280-41536-1-1/DB01E	Total	Water - NonPotable	Default Prep GenChem	13D0030_P

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## Lab Chronicle

Client: TestAmerica Denver  
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

**Client Sample ID: 280-41536-1-1/DB01E**

**Lab Sample ID: HWE0001-01**

**Date Collected: 04/24/13 12:05**

**Matrix: Water - NonPotable**

**Date Received: 04/24/13 14:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep GenChem		1.00	13D0030_P	04/25/13 14:57	NK	TAL HON
Total	Analysis	SM5210B		1.00	13D0030	04/30/13 15:12	NK	TAL HON

**Laboratory References:**

TAL HON = TestAmerica Honolulu, 99-193 Aiea Heights Drive, Suite 121, Aiea, HI 96701, TEL 808-486-5227

## Certification Summary

Client: TestAmerica Denver  
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

### Laboratory: TestAmerica Honolulu

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E87907	05-30-13
Hawaii	State Program	9	N/A	06-28-13
USDA	Federal		HON-S-206	01-31-15

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TestAmerica Honolulu

## Method Summary

Client: TestAmerica Denver  
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

Method	Method Description	Protocol	Laboratory
SM5210B	General Chemistry Parameters		TAL HON

### Protocol References:

### Laboratory References:

TAL HON = TestAmerica Honolulu, 99-193 Aiea Heights Drive, Suite 121, Aiea, HI 96701, TEL 808-486-5227

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## **FIELD INFORMATION FORM**



Site  
Name:  
Site  
No.:

DBOIE - WGSI

1995 Sample  
Date

• 1080116

Sample II

This Waste Management Field Information Form is Required

This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID

PURGE INFO		PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hr:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED			
Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.										
PURGE SAMPLE EQUIPMENT		Purging and Sampling Equipment... Dedicated: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N		Filter Device: <input type="checkbox"/> Y or <input checked="" type="checkbox"/> N <input type="checkbox"/> 0.45 µ or <input type="checkbox"/> µ (circle or fill in)						
Purging Device		A-Submersible Pump B-Peristaltic Pump C-QED Bladder Pump	D-Bailer E-Piston Pump F-Dipper/Bottle	Filter Type: <input type="checkbox"/>	A-In-line Disposable B-Pressure C-Vacuum X-Other _____					
Sampling Device		X-Other: <input type="checkbox"/>		Sample Tube Type: <input type="checkbox"/>	A-Teflon B-Stainless Steel C-PVC D-Polypropylene X-Other: _____					
WELL DATA		Well Elevation (at TOC) <input type="checkbox"/> (ft/msl)	Depth to Water (DTW) (from TOC) <input type="checkbox"/> (ft)	<input type="checkbox"/>	Groundwater Elevation (site datum, from TOC) <input type="checkbox"/> (ft/msl)					
Total Well Depth (from TOC) <input type="checkbox"/> (ft)		Stick Up (from ground elevation) <input type="checkbox"/> (ft)	<input type="checkbox"/>	Casing ID <input type="checkbox"/> (in)	Casing Material <input type="checkbox"/>					
Note: Total Well Depth, Stick Up, Casing Id. etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.										
STABILIZATION DATA (Optional)		Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	DO (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
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I certify that sampling procedures were in accordance with applicable EPA, State, and NMRA methods (*i.e.* no more than one sampling effort per day).

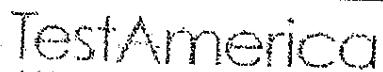
1 / 1  
4/24/13  
Page

Lauren Molina

Jeanne Moen

ACCOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample; YELLOW - Returned to Client; PINK - File Copy



Rush TAT Confirmation (Initials/Date) \_\_\_\_\_

## Sample Receipt Checklist

Client Name: TA Denver  
(AECOM project)Date/ Time Received: 4/24/13 14:30  
Received By: KRMatrices: AQCarrier: AECOM

Airbill#:

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Chain of Custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>
Chain of Custody Signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>
Chain of Custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>
Sample containers on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Type: <u>Wet</u>
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>
Water - VOA Vials have Zero Headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials present: <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Checked: <input checked="" type="checkbox"/>
pH Adjusted? Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	Final pH: _____
Encore / MI-VOC / 5035 Vials Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Location: _____
Sample Filtration Needed?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Filtered in Field: <input type="checkbox"/>
Dry Weight Corrected Results?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Take Action: <input type="checkbox"/>
DODQSM / QAPP Project?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Type: _____

Temperature Blank Present? Yes  No Sample Container Temperature: 1.2 °C

## Comments/ Sampling Handling Notes:

TA Honolulu to perform BOD + CrVI preservation only.

## Chain of Custody Record

Sampler ID \_\_\_\_\_

Temperature on Receipt \_\_\_\_\_

Drinking Water? Yes  No

THE LEADER IN ENVIRONMENTAL TESTING

# TestAmerica

TAL-4124-280 (0508)

Client	W.A.S.C. Management / AP/Env.		Project Manager	Mike Hollerby		Date	4/24/13	Chain of Custody Number	168564	
Address	1001 Bishop St. Suite 1000		Telephone Number (Area Code)/Fax Number	(808-536-5319)		Lab Number		Page	1 of 1	
City	Honolulu	State	Zip Code	501	Lab Contact	F: 808-323-10950				
Project Name and Location (State)	W.A.S.C. Management / AP/Env.		Carrier/Waybill Number	T-111111111111111111		Analysis (Attach list # if more space is needed)				
Contract/Purchase Order/Quote No.	60287037.07		Matrix	Containers & Preservatives						
Sample ID, No. and Description (Containers for each sample may be combined on one line)	Date	Time	At	Abysm	Soil	Soil	Soil	Soil	Soil	
DB01E	4/29/13	12:05	X							
DB01F	4/29/13	12:05	Z							
<input checked="" type="checkbox"/> Non-Hazardous <input type="checkbox"/> Flammable <input checked="" type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months _____										
Possible Hazard Identification	Non-Hazard		Flammable		Skin Irritant		Poison B		Unknown	
Turn Around Time Required	<input type="checkbox"/> 24 Hours		<input type="checkbox"/> 48 Hours		<input type="checkbox"/> 7 Days		<input checked="" type="checkbox"/> 14 Days		<input type="checkbox"/> 21 Days	
1. Relinquished By									Date 4/24/13 Time 14:37	
2. Relinquished By									Date _____ Time _____	
3. Relinquished By									Date _____ Time _____	
Comments	POD - ASAP TAT for MIL. All other samples to Review TAT/MIL. But to listed are same sample but D+6 collected									
DISTRIBUTION:	WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy									

# FIELD INFORMATION FORM



Site Name: DB01E - W6SL  
 Site No.: 995 Sample Point: DB01E  
 Sample ID:

This Waste Management Field Information Form is Required.

This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO		<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>		
PURGE DATE (MM DD YY)		PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED			
<i>Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.</i>									
PURGE/SAMPLE EQUIPMENT		Purging and Sampling Equipment ... Dedicated: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N		Filter Device: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N	0.45 $\mu$	$\mu$ (circle or fill in)			
Purging Device		A-Submersible Pump B-Peristaltic Pump C-QED Bladder Pump	D-Bailer E-Piston Pump F-Dipper/Bottle	Filter Type: <u></u>	A-In-line Disposable B-Pressure	C-Vacuum X-Other: <u></u>			
Sampling Device		X-Other: <u></u>		Sample Tube Type: <u></u>	A-Teflon B-Stainless Steel	C-PVC D-Polypropylene			
WELL DATA		Well Elevation (at TOC) <u></u>	Depth to Water (DTW) (from TOC) <u></u>	Groundwater Elevation (site datum, from TOC) <u></u>	(ft/msl) (ft) (ft/msl)				
Total Well Depth (from TOC) <u></u>		Stick Up (from ground elevation) <u></u>	Casing ID <u></u>	Casing (in) <u></u>	Casing Material <u></u>				
<i>Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.</i>									
STABILIZATION DATA (Optional)	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (umhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	<u></u>	<u></u>	<u>1<sup>st</sup></u>	<u>1<sup>st</sup></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
	<u></u>	<u></u>	<u>2<sup>nd</sup></u>	<u>2<sup>nd</sup></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
	<u></u>	<u></u>	<u>3<sup>rd</sup></u>	<u>3<sup>rd</sup></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
	<u></u>	<u></u>	<u>4<sup>th</sup></u>	<u>4<sup>th</sup></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
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	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
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	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
		Suggested range for 3 consec. readings or note Permit/State requirements:	<u>+/- 0.2</u>	<u>+/- 3%</u>	<u>-</u>	<u>--</u>	<u>+/- 10%</u>	<u>+/- 25 mV</u>	<u>Stabilize</u>
<i>Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.</i>									
FIELD DATA SAMPLE DATE (MM DD YY)		pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: _____ Units: _____	
<u>04 24 13</u>		<u>8.70</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	
<i>Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).</i>									
FIELD COMMENTS Sample Appearance: <u>Cloudy</u>		Odor: <u>none</u>		Color: <u>Slight brown</u>		Other: <u></u>			
Weather Conditions (required daily, or as conditions change):		Direction/Speed: <u>East</u>		Outlook: <u>Cloudy</u>		Precipitation: <u>Y</u> or <u>N</u>			
Specific Comments (including purge/well volume calculations if required):  <u>pH METER : YSI 10A, SN: JCA0784 calibrated with 4-7-10 buffer solutions at 0935.</u>  <u>Collect Sample @ 1140 (w/ +6' base - 6' lab</u> <u>1205 (all other) - composite</u>									
I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  <u>4,24,13</u> <u>Mark Bigelow</u> <u>Mark Bigelow</u> <u>AECOM</u>									
Date: <u>1/1</u>		Name: <u></u>		Signature: <u></u>		Company: <u></u>			
DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy									

## Chain of Custody Record

Sampler ID \_\_\_\_\_  
Temperature on Receipt \_\_\_\_\_

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client <b>Waste Management /AEOM</b>	Address <b>1001 Bishop St., Suite 1600</b>	City <b>Honolulu</b>	State <b>HI</b>	Zip Code <b>16813</b>	Project Name and Location (State) <b>W6SL Storm Water</b>	Contract/Purchase Order/Quote No. <b>60287037.02</b>	Project Manager <b>Mark Hofferbert</b>	Telephone Number (Area Code)/Fax Number <b>808-356-5317 F: 808-523-8950</b>	Date <b>4-24-13</b>	Lab Number <b>MS2108B0D</b>	Page <b>4 of 4</b>	Chain of Custody Number <b>168564</b>																								
Analysis (Attach extra sheet if more space is needed)																																				
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Comments <b>BOD - ASAP TAT in HNL All other samples to Denver TA // Both listed are same sample but O&amp;G collected first</b>																																				
DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy																																				

# FIELD INFORMATION FORM



Site  
Name:

**DBOIE - W GSL**

Site  
No.:

**995** Sample Point: **DBOIE**

Sample ID

This Waste Management Field Information Form is Required

This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO									
PURGE DATE (MM DD YY)		PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)		ACTUAL VOL PURGED (Gallons)	WELL VOL PURGED		
<i>Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.</i>									
PURGE/SAMPLE EQUIPMENT	Purging and Sampling Equipment... Dedicated: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N			Filter Device: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N	0.45 $\mu$	or <input type="checkbox"/> $\mu$ (circle or fill in)			
	Purging Device <input type="checkbox"/>	A-Submersible Pump	D-Bailer	A-In-line Disposable	C-Vacuum				
	Sampling Device <input type="checkbox"/>	B-Peristaltic Pump	E-Piston Pump	B-Pressure	X-Other				
X-Other: <input type="checkbox"/>	C-QED Bladder Pump	F-Dipper/Bottle	Sample Tube Type: <input type="checkbox"/>	A-Teflon	C-PVC	X-Other: <input type="checkbox"/>			
B-Stainless Steel	D-Polypropylene								
WELL DATA	Well Elevation (at TOC)	<input type="checkbox"/> (ft/msl)		Depth to Water (DTW) (from TOC)	<input type="checkbox"/> (ft)		Groundwater Elevation (site datum, from TOC)	<input type="checkbox"/> (ft/msl)	
	Total Well Depth (from TOC)	<input type="checkbox"/> (ft)		Stick Up (from ground elevation)	<input type="checkbox"/> (ft)		Casing ID (in)	Casing Material	
<i>Note: Total Well Depth, Stick Up, Casing Id. etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.</i>									
STABILIZATION DATA (Optional)	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) ( $\mu$ hos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	<input type="checkbox"/>	<input type="checkbox"/> 1 <sup>st</sup>	<input type="checkbox"/>	<input type="checkbox"/> 1 <sup>st</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/> 2 <sup>nd</sup>	<input type="checkbox"/>	<input type="checkbox"/> 2 <sup>nd</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/> 3 <sup>rd</sup>	<input type="checkbox"/>	<input type="checkbox"/> 3 <sup>rd</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/> 4 <sup>th</sup>	<input type="checkbox"/>	<input type="checkbox"/> 4 <sup>th</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suggested range for 3 consec. readings or note Permit/State requirements:		<input type="checkbox"/> +/- 0.2	<input type="checkbox"/> +/- 3%	<input type="checkbox"/> -	<input type="checkbox"/> --	<input type="checkbox"/> +/- 10%	<input type="checkbox"/> +/- 25 mV	<input type="checkbox"/> Stabilize	
<i>Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.</i>									
FIELD DATA SAMPLE DATE (MM DD YY)		pH (std)	CONDUCTANCE ( $\mu$ hos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: _____ Units	
<b>04/24/13</b>		<b>7.81</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).</i>									
FIELD COMMENTS Sample Appearance: <i>Cloudy</i>		Odor: <i>none</i>		Color: <i>slight brown</i>					
Weather Conditions (required daily, or as conditions change):		Direction/Speed: <i>calm</i>		Outlook: <i>clear</i>		Precipitation: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> R			
Specific Comments (including purge/well volume calculations if required):									
<i>Collect Sample @ 1140 (oil + Grease) - Grab (205 (all others) - Aliquot</i>									
I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):									
<i>4/24/13</i>		<i>Lauren Nolka</i>		<i>Lauren Nolka</i>		<i>ACCOM</i>			
DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy									
Page 73 of 75									
TAL-8029WM (0108)									

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-41536-1

**Login Number: 41536**

**List Source: TestAmerica Denver**

**List Number: 1**

**Creator: Broander, Laura**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	Refer to job narrative for details
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	N/A	Shipped from Hawaii
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-41536-1

**Login Number: 41536**

**List Source: TestAmerica Irvine**

**List Number: 1**

**List Creation: 04/30/13 02:10 PM**

**Creator: King, Ronald**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	